Mental Health in Academia

Problems, Solutions and Perspectives

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CNIC PhDay 2019

Facts about Mental Health Disorders

- ± 1/3 people suffer from a mental health disorder at some point in their life

- Differences between countries:
  Diagnosis only!
  Only 8-14% seek treatment in developed countries
  Taboo?

- High disease burden:
  - Early age of onset (adolescence or early adulthood)
  - Often chronic
  - 28.5% of years lived with disability caused by mental, neurological and substance abuse disorders
  - Depression leading cause of disability in high-income countries

- High costs: € 418 billion in Europe (2010: direct + indirect costs)

Lifetime prevalence of mental health disorders

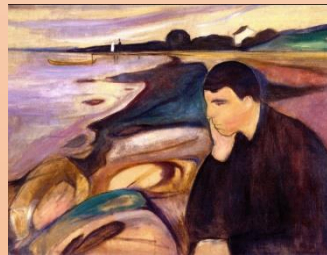|	
USA	~48
DE	~25
NL	~32
SP	~19
China	~13
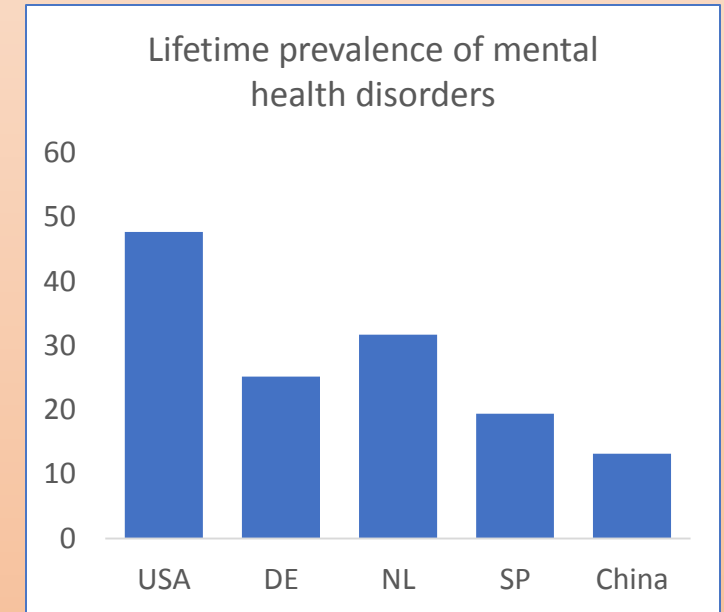
Types of Mental Health Disorders

- Anxiety disorders
  - Specific phobias
  - Social anxiety disorder
  - Panic disorder

- Mood disorders
  - Depression
  - Bipolar disorder

- Schizophrenia

- Impulse control disorders
  - ADHD

- Autism spectrum disorders

- Substance abuse disorders
  - Alcoholism
  - Drug abuse

- Eating disorders

- Etc.

Causes for Mental Health Issues

- Genetically determined risk:
  - Schizophrenia, bipolar disorder, autism: 60-80%
  - Depression: ± 37%
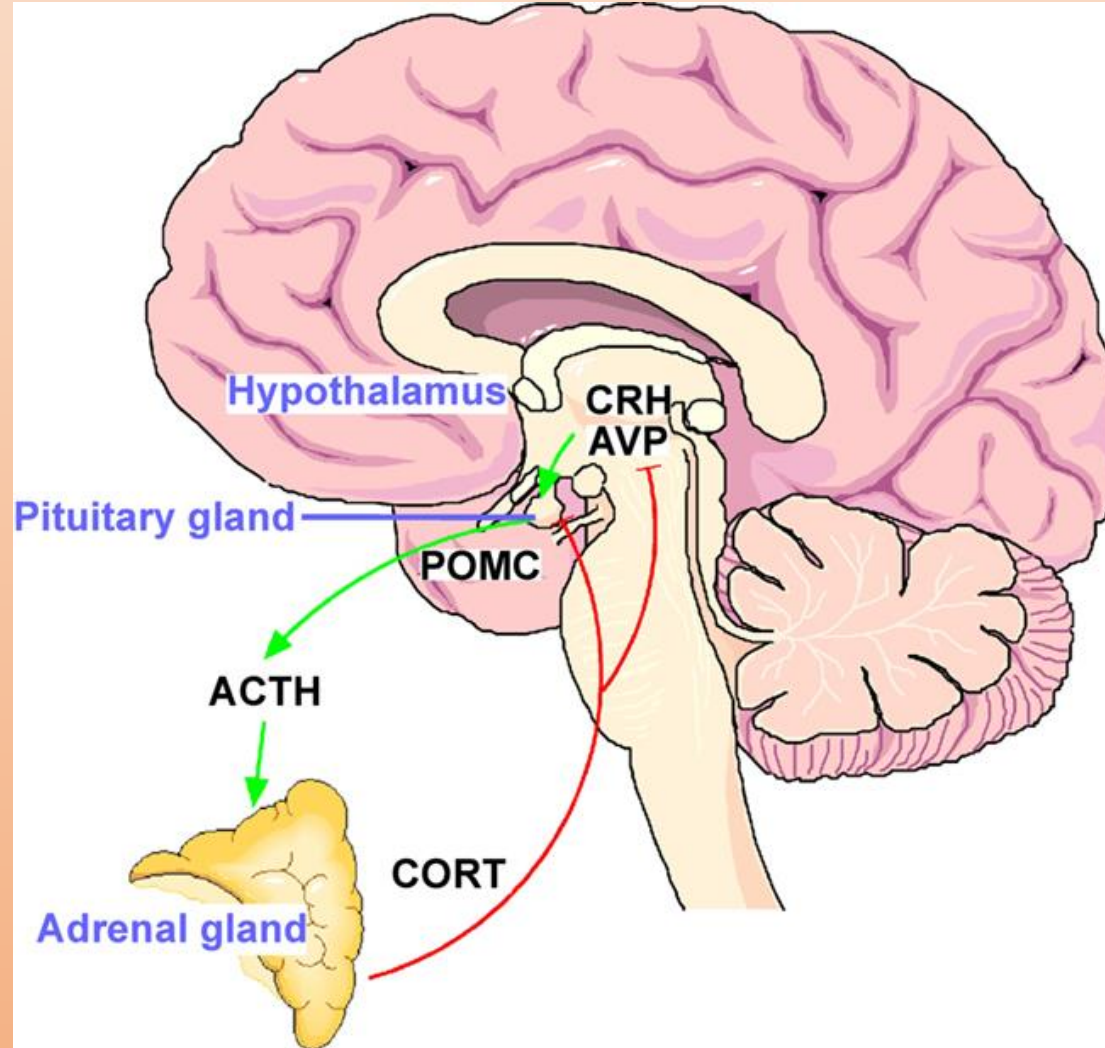 - Anxiety disorders: 30-67%

- Environmental factors:
  - **Stressful life events**
  - Prenatal stress
  - Childhood trauma
  - Parenting style
  - Physical conditions
  - Drug (ab)use
  - Social-economic status
  - Urbanicity
  - **Social environment / support**

HPA-axis: the Link between Stress and the Brain

Examples of Stressors

- Physical health
  - Medical conditions
  - Diet
  - Sleep / rest
- Cognition
  - Intelligence
  - Memory and attention
  - Coping styles
- Personality
- Financial situation

- Housing situation
- Work-environment
  - Job control
  - Workload
  - Work-life balance
- Social environment
  - Social support (family + friends)
  - Relationship status / state
- Conflict

Mental Health in Academia

- Undergraduate students (US):
  - 11% extreme stress levels
  - 11% symptoms of depression
  - 15% symptoms of anxiety

The prevalence and correlates of depression, anxiety, and stress in a sample of college students

R. Beiter, R. Nash, M. McCrady, D. Rhoades, M. Linscomb, M. Clarahan, S. Sammut*

- US graduate students (90% PhDs):
  - 41% modere to severe anxiety
  - 39% depression
  - 6% in general population

Evidence for a mental health crisis in graduate education

Teresa M Evans[1], Lindsay Bira[2], Jazmin Beltran Gastelum[3], L Todd Weiss[4] & Nathan L Vanderford[4,5]

- PhD candidates:
  - 25% concerned about mental health
  - 12% sought assistance

A love–hurt relationship

Nature's 2017 PhD survey reveals that, despite many problems with doctoral programmes, PhD students are as committed as ever to pursuing research careers.

- Academic staff (UK):
  - 37% prevalence of mental health disorders

Understanding mental health in the research environment

A Rapid Evidence Assessment

RAND EUROPE

Methodology: GHQ

- General Health Questionnaire
  - 28 or 12-items
  - More than 4 symptoms indicates elevated risk for mental health problems (GHQ4+)
  - Not a diagnostic tool

Tension, feeling under constant pressure
Unhappy or depressed
Lack of sleep
Unable to overcome difficulties
Concentration problems
Not enjoying normal day-to-day activities
Lack of self-confidence
Not feeling happy
Sense of not playing a useful role
Difficulty in making important decisions
Not able to face problems
Feeling of worthlessness

Mental Health among PhD Candidates

Work organization and mental health problems in PhD students

Katia Levecque[a,b,*], Frederik Anseel[a,b,c], Alain De Beuckelaer[d,e,a], Johan Van der Heyden[f,g], Lydia Gisle[f]

- Belgian PhD candidates:
  - 51% experiences psychological distress
  - 32% so many symptoms that they were at extreme risk
  - Comparison with (1) higher education students, (2) highly educated individuals, (3) highly educated employees
  - Respectively 1.85, 2.43 and 2.84 higher risk for developing MH problems

- Confirmatory study in Leiden (NL):
  - 38.3% showed more than 4 symptoms

THE MENTAL WELL-BEING OF LEIDEN UNIVERSITY PhD CANDIDATES

CWTS POLICY REPORT
Meaningful metrics

Mental Health Problems among German PhD Candidates

- German research landscape:
  - Universities (16 states)
  - Scientific societies (Max Planck Society, Fraunhofer, Leibniz, Helmholtz)

- N2 network = PhD networks of scientific societies
  - Surveys at Max Planck PhDnet and Helmholtz Juniors in 2017
  - Joint survey in 2018
  - Max Planck: 53% stressed about PhD, 16% very stressed (>3 symptoms)
  - Helmholtz: >60% not able to focus on PhD, 40% not able to cope with tasks, 20% not able to handle workload

Factors affecting Mental Health in Academia

- Work-life and life-work balance
- Financial situation and funding opportunities
- Job demands
- Job control
- (Perception of) career perspectives
- Influence on decision making
- Relationship to supervisor
- Belonging to a minority group (gender, nationality etc.)
- Social support

Suggestions for Improvement

- Personal level

- **Institutional level**
  - Supervision and leadership
  - Financial security and job security
  - Work demands and work-life balance
  - Career development
  - Administrative and material support
  - Social environment

- Systemic level

Personal Improvement

- Identify stressors
- Sleep, food, physical activity, social environment etc.
- Recognize thoughts and behaviours

Getting help
- Talk to social environment
- Talk to counsellor
- Online self-help
- General practitioner / specialist

Supervision and Leadership

- Often frustration no. 1
- Ideally:
  - Involved supervisor
  - Concrete and realistic (time) plan
  - Plan B in case experiments go wrong
- Measures:
  - Mandatory PhD plan + timeline
  - Mandatory regular status meetings
  - Independent Thesis Advisory Committee
  - Limit the number of PhDs per supervisor
  - Leadership training for supervisors
  - Monitoring performance of supervisors

Power Abuse in Academia

Top geneticist loses £3.5-million grant in first test of landmark bullying policy

The Wellcome Trust pulled the grant from Nazneen Rahman, who worked at the Institute of Cancer Research in London.

She's the world's top empathy researcher. But colleagues say she bullied and intimidated them

By Kai Kupferschmidt | Aug. 8, 2018 , 4:10 PM

Solutions:

- Training

- Arbitration procedures (resolvement, new supervision selection, data use, publication)

- Code of conduct

- Consequences

Financial Security and Funding Opportunities

- Contract not stipend (social security)
- Fair payment
- Contract duration
- Ability to plan life events

- Measure:
  - Aligning interests
  - Tying PhD to pre-determined goals (e.g. number of publications)
  - Coupling with financial incentive for academic institution (e.g. 50 000 euros in the Netherlands)

Work Demands and Work-Life Balance

- Academics usually really like their job (68% satisfaction in Nature Survey)
- Positive correlation time spent on research and positive emotions
- Work >40 hours
- (unconscious) impact on life

- Solutions:
    - Work-life balance training
    - Encouragement to take available holidays
    - Remote work and part-time work
    - Work-family support structures:
        - Day care at institute
        - Financial support for families
        - Job opportunties / networks for partners

Career Development

Are PhDs just cheap labour for universities?

PhD grads complain that there are too few academic jobs. Should universities support their postgrads into alternative careers?

- 13% of PhD candidates manage to continue to work in academia
- 75% of PhD candidates wants to continue in academia, but also interested in alternative career paths
- Uncertainty about career perspectives cause for stress

- Cultural change
- Academic career not 'ideal standard'
- Transferrable skills
- Career counselling
- Career days

CAREER COLUMN · 28 AUGUST 2019

Make science PhDs more than just a training path for academia

Administrative and Material Support

- Sufficient resources to conduct research

- Aforementioned administrative changes

- Institutional health/psychological check-ups

- Psychological support & counselling

- Training in recognizing symptoms in own and other's behaviour

- Online self-help guide

- Online guide on how to find assistance, including foreign language!
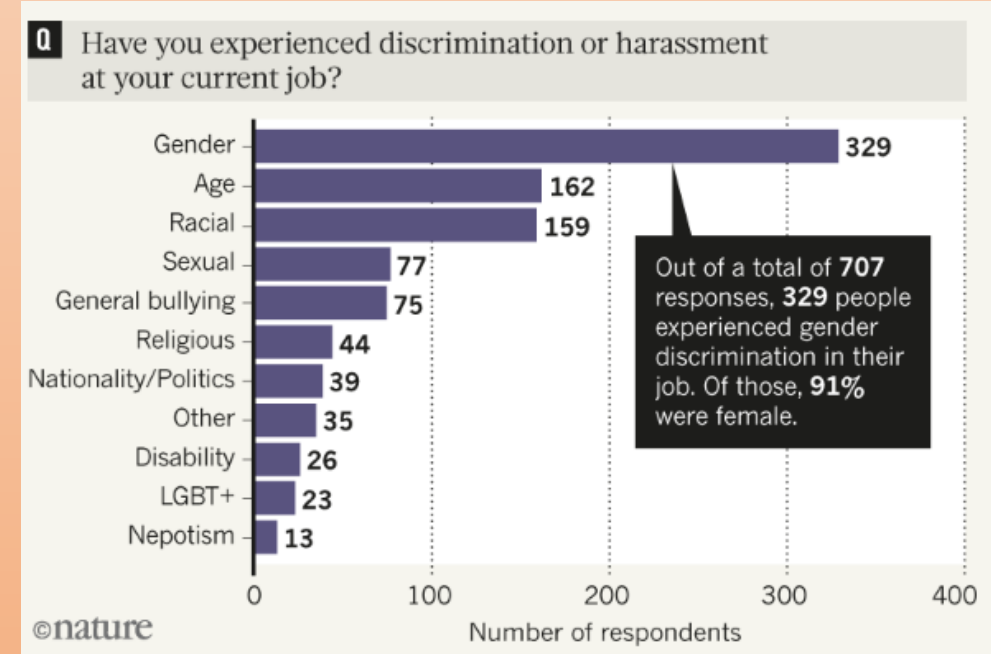
- Protection of minority groups

University counselling services 'inundated by stressed academics'

By Hannah Richardson
BBC News education and social affairs reporter

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Social Support and Communication

- PhD representative body
- Peer groups / social events
- Social support for foreign nationals
- Taboo
- Stigma

- Awareness initiatives
  - Mental health
  - Normalization of symptoms of maladaptive behaviour
  - Ethnic diversity
  - Disability
  - Gender
  - LGBTQIA+

Have you experienced discrimination or harassment at your current job?

Category	Number of respondents
Gender	329
Age	162
Racial	159
Sexual	77
General bullying	75
Religious	44
Nationality/Politics	39
Other	35
Disability	26
LGBT+	23
Nepotism	13

Out of a total of **707** responses, **329** people experienced gender discrimination in their job. Of those, **91%** were female.
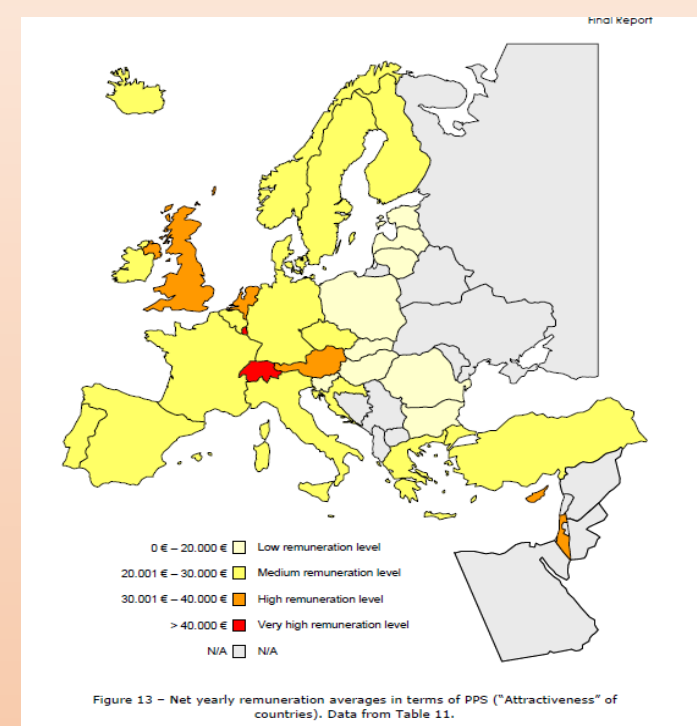
©nature

Systemic Changes

- The academic pyramid
- Measures of success
- Publication policies
  - Replication
  - Null findings
- Power balance and PI selection
  - Separation of scientific leadership and management
  - Independent supervision
  - Leadership skills
  - Reverse reference system
- Career diversity
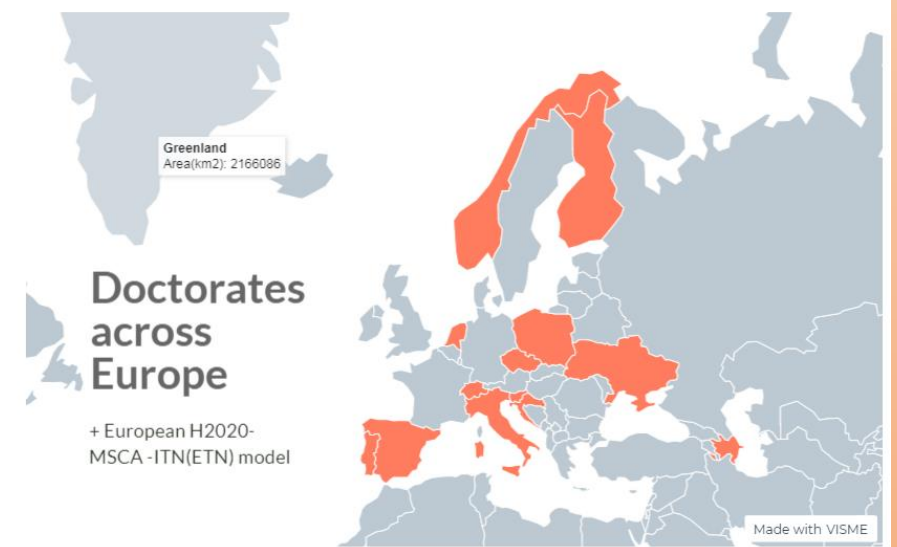- Criminalization of scientific fraud
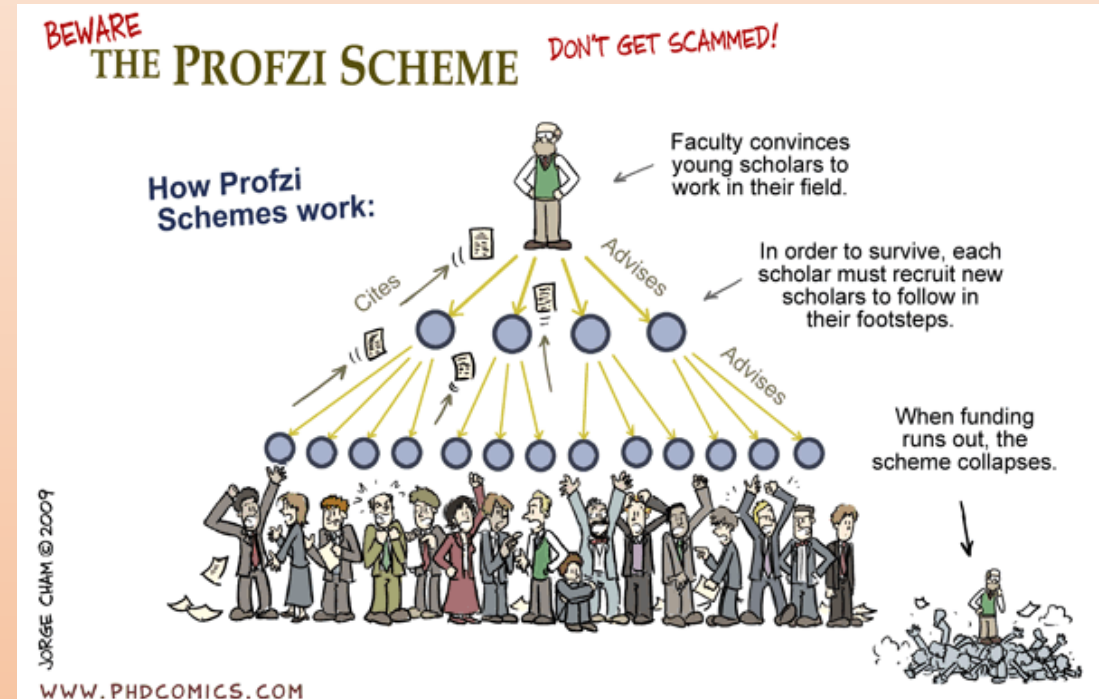
International Perspectives

- PhD students vs doctoral researcher
- Salary levels
- Requirements for performing and obtaining a PhD
- Eurodoc survey
  - General info & admission
  - Progression
  - Graduation
- Mental Health attention (partially cultural)
  - UK best-case example

Figure 13 – Net yearly remuneration averages in terms of PPS ("Attractiveness" of countries). Data from Table 11.

EURODOC survey on the structure of the doctorates across europe

Doctorates across Europe

+ European H2020-MSCA -ITN(ETN) model

Future Perspectives

- Standardizing institutional changes

- Standardized international / European surveys

- More focus on senior researchers (postdocs and PI's)

- More institutional, regional, national and international networking

Thanks for your attention

If you have any questions feel free to contact

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